Gunter, Jason

From: James, Kevin <kjames@doerun.com>
Sent: Thursday, December 11, 2014 12:02 AM
To: Gunter, Jason
Cc: Yingling, Mark; Neaville, Chris; Montgomery, Michael; "Kevin Lombardozzi' (kevinl@VALHI.NET)'; 'Norman Lucas (cityhall@i1.net)'; 'robert.hinkson@dnr.mo.gov'; 'brandon.wiles@dnr.mo.gov'; 'Ty Morris (TMorris@barr.com)'
Subject: National Progress Report - November
Attachments: removed.txt; 2014-11-19 NAT UAO Pace Lab Report.pdf; National_ProgressReport-Nov2014.pdf; Remediation Air Report with 4thQ Audit - October 2014.pdf

Jason -

Attached is the November Progress Report for the National Site.

Best regards,

Kevin James

Kevin James
Environmental Engineering
W: 573.626.2096
C: 573.247.6766

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

December 01, 2014

Amy Sanders
The Doe Run Company
P. O. Box 500
Viburnum, MO 65566

RE: Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

Dear Amy Sanders:
Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures

Pace Analytical®
www.pacelabs.com

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CERTIFICATIONS

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60182951001	**23072 / NAT EAST**	Water	11/19/14 09:37	11/20/14 06:20

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SAMPLE ANALYTE COUNT

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60182951001	**23072 / NAT EAST**	EPA 200.7	NDJ	6	PASI-K
		EPA 200.7	NDJ	3	PASI-K
		SM 2540C	JML	1	PASI-K
		SM 2540D	JMC1	1	PASI-K
		SM 2540F	JML	1	PASI-K
		SM 4500-H+B	ESM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		SM 5310C	JMC1	1	PASI-K

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ANALYTICAL RESULTS

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

Sample: 23072 / NAT EAST **Lab ID: 60182951001** Collected: 11/19/14 09:37 Received: 11/20/14 06:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	ND	ug/L	5.0	0.56	1	11/22/14 10:44	11/24/14 17:39	7440-43-9	
Calcium	**104000**	ug/L	100	7.8	1	11/22/14 10:44	11/24/14 17:39	7440-70-2	
Lead	**8.1**	ug/L	5.0	2.2	1	11/22/14 10:44	11/24/14 17:39	7439-92-1	
Magnesium	**55500**	ug/L	50.0	17.0	1	11/22/14 10:44	11/24/14 17:39	7439-95-4	
Total Hardness by 2340B	**489000**	ug/L	500		1	11/22/14 10:44	11/24/14 17:39		
Zinc	**122**	ug/L	50.0	12.5	1	11/22/14 10:44	11/24/14 17:39	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium, Dissolved	**0.99J**	ug/L	5.0	0.56	1	11/26/14 11:20	11/26/14 16:49	7440-43-9	B
Lead, Dissolved	**5.1**	ug/L	5.0	2.2	1	11/26/14 11:20	11/26/14 16:49	7439-92-1	B
Zinc, Dissolved	**107**	ug/L	50.0	12.5	1	11/26/14 11:20	11/26/14 16:49	7440-66-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**693**	mg/L	5.0	5.0	1		11/26/14 16:36		
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**7.0**	mg/L	5.0	5.0	1		11/25/14 13:58		
2540F Total Settleable Solids	Analytical Method: SM 2540F								
Total Settleable Solids	ND	mL/L/hr	0.20	0.20	1		11/20/14 16:00		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**8.0**	Std. Units	0.10	0.10	1		11/24/14 12:30		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**229**	mg/L	20.0	10.0	20		11/25/14 16:38	14808-79-8	
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.81J**	mg/L	1.0	0.50	1		11/25/14 10:08	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

QC Batch: MPRP/29935
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60182951001

METHOD BLANK: 1484231
Matrix: Water
Associated Lab Samples: 60182951001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	ND	5.0	11/24/14 17:08	
Calcium	ug/L	ND	100	11/24/14 17:08	
Lead	ug/L	ND	5.0	11/24/14 17:08	
Magnesium	ug/L	ND	50.0	11/24/14 17:08	
Total Hardness by 2340B	ug/L	ND	500	11/24/14 17:08	
Zinc	ug/L	ND	50.0	11/24/14 17:08	

LABORATORY CONTROL SAMPLE: 1484232

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	1000	1020	102	85-115	
Calcium	ug/L	10000	9240	92	85-115	
Lead	ug/L	1000	996	100	85-115	
Magnesium	ug/L	10000	9290	93	85-115	
Total Hardness by 2340B	ug/L		61300			
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1484233 1484234

Parameter	Units	60182949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	ND	1000	1000	1030	1040	103	104	70-130	0	20	
Calcium	ug/L	50200	10000	10000	59000	59500	88	93	70-130	1	20	
Lead	ug/L	ND	1000	1000	992	1000	99	100	70-130	1	20	
Magnesium	ug/L	30300	10000	10000	39500	40000	92	96	70-130	1	20	
Total Hardness by 2340B	ug/L	250000			310000	313000				1		
Zinc	ug/L	17.7J	1000	1000	1000	1010	98	99	70-130	1	20	

MATRIX SPIKE SAMPLE: 1484235

Parameter	Units	60182950001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	2.6J	1000	1050	105	70-130	
Calcium	ug/L	116000	10000	125000	87	70-130	
Lead	ug/L	5.1	1000	1010	100	70-130	
Magnesium	ug/L	46800	10000	56500	97	70-130	
Total Hardness by 2340B	ug/L	483000		545000			
Zinc	ug/L	3180	1000	4150	96	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

QC Batch: MPRP/29961
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60182951001

METHOD BLANK: 1485376
Matrix: Water
Associated Lab Samples: 60182951001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	0.79J	5.0	11/26/14 16:47	
Lead, Dissolved	ug/L	2.3J	5.0	11/26/14 16:47	
Zinc, Dissolved	ug/L	ND	50.0	11/26/14 16:47	

LABORATORY CONTROL SAMPLE: 1485377

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	ug/L	1000	1040	104	85-115	
Lead, Dissolved	ug/L	1000	1030	103	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

QC Batch: WET/51766
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60182951001

METHOD BLANK: 1485971
Matrix: Water
Associated Lab Samples: 60182951001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	11/26/14 16:35	

LABORATORY CONTROL SAMPLE: 1485972

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	978	98	80-120	

SAMPLE DUPLICATE: 1485973

Parameter	Units	60182912001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	19800	19900	1	10	

SAMPLE DUPLICATE: 1485974

Parameter	Units	60183033001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	512	495	3	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

QC Batch: WET/51737 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60182951001

METHOD BLANK: 1485075 Matrix: Water
Associated Lab Samples: 60182951001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	11/25/14 13:54	

SAMPLE DUPLICATE: 1485076

Parameter	Units	60182933003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	17.0	12.0	34	10	D6

SAMPLE DUPLICATE: 1485077

Parameter	Units	60182949001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	14.0	11.0	24	10	D6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

QC Batch: WET/51712
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60182951001

SAMPLE DUPLICATE: 1484379

Parameter	Units	60182866002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.4	6.4	0	5	H6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

QC Batch: WETA/31950
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60182951001

METHOD BLANK: 1484175 Matrix: Water
Associated Lab Samples: 60182951001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	11/25/14 13:11	

LABORATORY CONTROL SAMPLE: 1484176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1484177 1484178

Parameter	Units	60182949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	35.3	25	25	60.4	59.5	100	97	80-120	1	15	

MATRIX SPIKE SAMPLE: 1484179

Parameter	Units	60183029007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	587	250	949	145	80-120	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

QC Batch: WETA/31948
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60182951001

METHOD BLANK: 1484092 Matrix: Water
Associated Lab Samples: 60182951001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	11/25/14 07:32	

LABORATORY CONTROL SAMPLE: 1484093

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.2	103	80-120	

MATRIX SPIKE SAMPLE: 1484095

Parameter	Units	60183029007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.7	5	7.0	106	80-120	

SAMPLE DUPLICATE: 1484094

Parameter	Units	10288874007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	2.2	2.2	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K	Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NATIONAL UAO (NATIONAL)
Pace Project No.: 60182951

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60182951001	**23072 / NAT EAST**	EPA 200.7	MPRP/29935	EPA 200.7	ICP/22408
60182951001	**23072 / NAT EAST**	EPA 200.7	MPRP/29961	EPA 200.7	ICP/22425
60182951001	**23072 / NAT EAST**	SM 2540C	WET/51766		
60182951001	**23072 / NAT EAST**	SM 2540D	WET/51737		
60182951001	**23072 / NAT EAST**	SM 2540F	WET/51655		
60182951001	**23072 / NAT EAST**	SM 4500-H+B	WET/51712		
60182951001	**23072 / NAT EAST**	EPA 300.0	WETA/31950		
60182951001	**23072 / NAT EAST**	SM 5310C	WETA/31948		

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Sample Condition Upon Receipt

WO#: 60182951

60182951

Optional
Proj Due Date:
Proj Name:

Client Name: DRC

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☒ VIA

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Other ☑ ZIPLOC

Thermometer Used: T-239 / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2-6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JW 11/20/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. pH S.S
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☑N/A	
Pace Trip Blank lot # (if purchased): _____		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jason Church 11/21/14 Date: _____

THE DOE RUN COMPANY

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:

Company:	
Address:	
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	
Copy To:	
Purchase Order No.:	
Project Name:	National UAO (National)
Project Number:	

Section C Invoice Information:

Attention:	Amy Sanders
Company Name:	The Doe Run Company
Address:	PO Box 500, Viburnum, MO 65566
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ UST ☐ RCRA

Site Location STATE: MO

Page: 1 of 1

COC#: 1084 6015/2957

Requested Analysis Filtered (Y/N)

ITEM #	Section C Required Sample Information — SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE/TIME: COMPOSITE START DATE (mm/dd/yy)	COMPOSITE START TIME (Military)	COMPOSITE END / GRAB DATE (mm/dd/yy)	COMPOSITE END / GRAB TIME (Military)	SAMPLE TEMP AT COLLECTION	Total # OF CONTAINERS	Bottles / Preservatives: 250 mL Unpreserved	500 mL Unpreserved	1 L Unpreserved	250 mL Nitric	250 mL Amber Glass H_2SO_4	250 mL Plastic H_2SO_4	1000 mL Amber HCL	250 mL ZnAc/NaOH	500 mL Amber Glass H_2SO_4	*See Additional Comments Below / Analysis Test	SEMO Lab Project No / Lab I.D.
	Valid Matrix Codes: MATRIX — WATER, WASTE WATER, SOIL/SOLID; CODE — WT, WW, SL									N	N	N	N	N	N	N	N	N		
1	23072 1AGSS 1BPBN-C 1BPLU 1BPLU	WT	G			11/19/14	0937		5	2		1	1	1					CD-D, PB-D, ZN-D, HARD, PH, SO4, SS, TDS, TOC, TSS	Nat East
2																			CD-T, PB-T, ZN-T	
3																				
4																				
5																				
6																				
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30																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME (Military)	ACCEPTED BY / AFFILIATION	DATE	TIME (Military)	SAMPLE CONDITIONS: Temp in °C	pH in SU	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)
200.7-Total Recoverable and Dissolved Metals	Larry Hopkins DRC	11/19/14	1100	[illegible]	11/20/14	1024	2.6		X	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Larry Hopkins

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/19/14

THE DOE RUN COMPANY

Remediation Group

Kevin James
Environmental Engineering Supervisor
kjames@doerun.com

December 10, 2014

Mr. Jason Gunter
Remedial Project Manager
U.S. Environmental Protection Agency
Region 7 - Superfund Branch
11201 Renner Blvd.
Lenexa, KS 66219

Re: National Mine Tailings Site Progress Report

Dear Mr. Gunter:

As required by Article VI, Section 51 of the Unilateral Administrative Order (Docket No.CERCLA-07-2006-0231) for the referenced project and on behalf of The Doe Run Company and NL Industries, Inc., the progress report for the period November 1, 2014 through November 30, 2014 is enclosed. If you have any questions or comments, please call me at 573-626-2096.

Sincerely,

Kevin James
Environmental Engineering Supervisor

Enclosure
c: Mark Yingling – TDRC (electronic only)
Chris Neaville – TDRC (electronic only)
Michael Montgomery – TDRC (electronic only)
Kevin Lombardozzi – NL Industries, Inc.
Matt Whitwell – City of Park Hills
Norm Lucas – Park Hills – Leadington Chamber of Commerce
Brandon Wiles – MDNR
Ty Morris – Barr Engineering

National Mine Tailings Site
Park Hills, Missouri
Removal Action - Monthly Progress Report
Period: November 1, 2014 – November 30, 2014

1. **Actions Performed and Problems Encountered This Period:**
   a. Work continued on the development of the Post Removal Site Control Plan for the site.

2. **Analytical Data and Results Received This Period:**
   a. During this period, water samples were collected at the sampling locations identified in Appendix C of the Removal Action Work Plan where water was present. Copies of the analytical results from the last sampling event are included with this progress report.
   b. During this period, the ambient air monitoring samples for October were processed and the Ambient Air Monitoring Report for October 2014 was completed. A copy of the Ambient Air Monitoring Report for October is attached.
   c. During this period the quarterly audits of the monitors and the semi-annual audit of the meteorological system was completed. A copy of the 4th Quarter 2013 Lead/PM10 Samplers and Meteorological System Performance Audit Report is attached.

3. **Developments Anticipated and Work Scheduled for Next Period:**
   a. Continue developing the Post Removal Site Control Plan for the site.
   b. Continue developing the Removal Action Report and the record drawings.
   c. Complete monthly water sampling activities as described in the Removal Action Work Plan.
   d. Complete air monitoring activities as described in the Removal Action Work Plan.

4. **Changes in Personnel:**
   a. Mark Nations has retired from The Doe Run Company and will no longer act as the Project Coordinator.
   b. Kevin James will now be the Project Coordinator for The Doe Run Company. In accordance with Section VII, Paragraph 67, of the above referenced Unilateral Administrative Order this will serve as the written notice of the change in Project Coordinators.
   c. The following members of the remediation group working in the Old Lead Belt region have been transferred to positions at the active mining and milling operations - Chris Rawlins, Jimmie Minx, Keith Bates, Adam Mills, and Steve Sadler.

5. **Issues or Problems Arising This Period:**
   a. None.

6. **Resolution of Issues or Problems Arising This Period:**
   a. None.